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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1-26. (Canceled)

27. (New) A method of detecting a single-nucleotide replacement, comprising:

- 1) hybridizing a sample DNA including a single-nucleotide replacement site with a plurality of types of DNA probes, having a complementary sequences to sequences contained in the sample DNA, wherein each of the DNA probes is labeled with a different marker substance at a nucleotide that pairs up with the nucleotide of the single-nucleotide replacement site, the different marker substances generating light of different wavelengths depending on a pattern of the nucleotide corresponding to the single-nucleotide replacement site;
- 2) reacting a DNA strand, a part of which is double stranded, obtained in step 1), with a nucleic acid synthesizing enzyme having a repair function; and
- 3) optically measuring micro-movement of the marker substance at a plurality of points in a lapse of time in the reaction of step 2).

28. (New) The method according to claim 27, wherein the micro-movement is of a type in which the marker substance moves in and out of a confocal region of a confocal microscope.

29. (New) The method according to either one of claims 27 and 28, wherein the marker substance is selected from the group consisting of a light-emitting substance and a fluorescent substance.

30. (New) The method according to claim 28, wherein means for optically measuring the micro-movement of the marker substance is means for measuring Brownian movement of molecules of the marker substance by a fluorescent correlation spectroscopy.